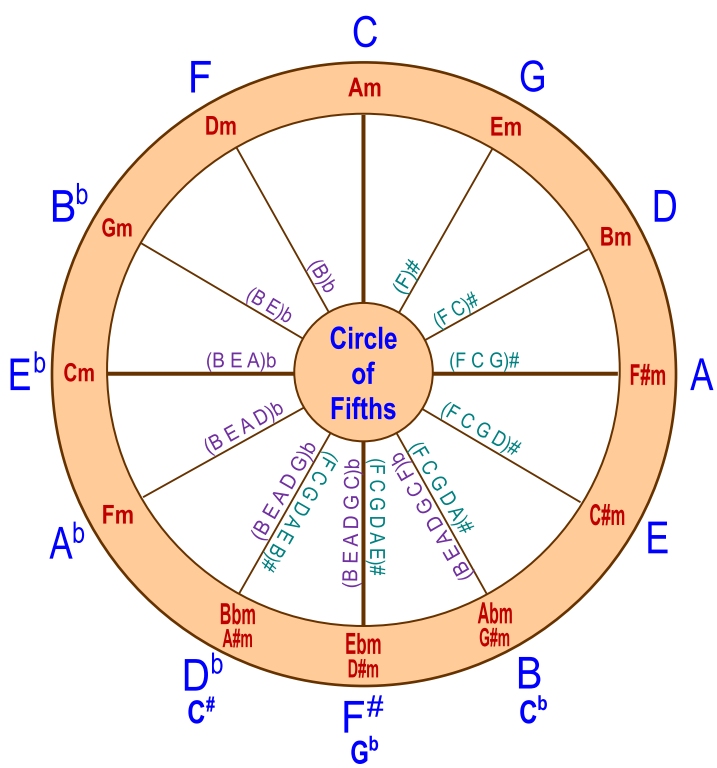
Practical
Music Theory

Music theory can be complex. But knowing enough to be able to apply it to practical goals can speed learning, aid improvisation, and give you a sense of empowerment.

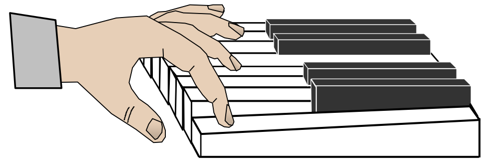


Terms

Musical terms can be confusing when they are used interchangeably.

Key = Lever

A *physical* key is a lever that produces a musical tone when pressed.



Key = Lever

Key = Scale

A *musical* Key is the first tone of a Scale. Example: Key of C.

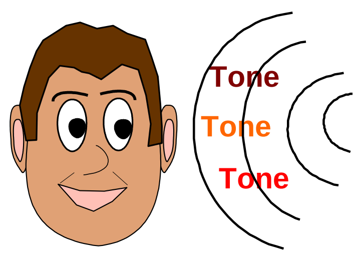
Do Re Mi Fa So La Ti Do

Key = Do

Ambiguity: The Key of C (scale) begins on the C key (lever).

Tone = Sound

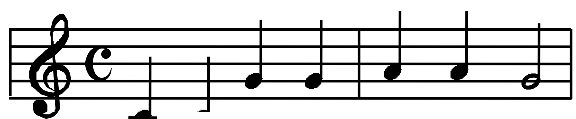
Tones are musical sounds (vibrations) produced when you press a key. Tones vary in pitch (frequency) from low to medium to high.



Tone = Sound

Note = Symbol

Notes are symbols that appear on a musical staff to indicate which keys (levers) are to be pressed.

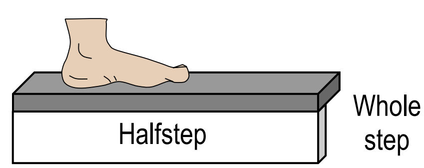


Note = Symbol

Ambiguity: Technically, notes (symbols) exist only on paper, but tones (sounds) are also called “notes.”

Step = Movement

Steps are melodic movements between tones. Like walking up a staircase, playing steps on a keyboard requires physical movement.



Step = Movement

Ambiguity: Each key (lever) is a halfstep which produces a semitone. Two keys make a whole step which produces a whole tone.

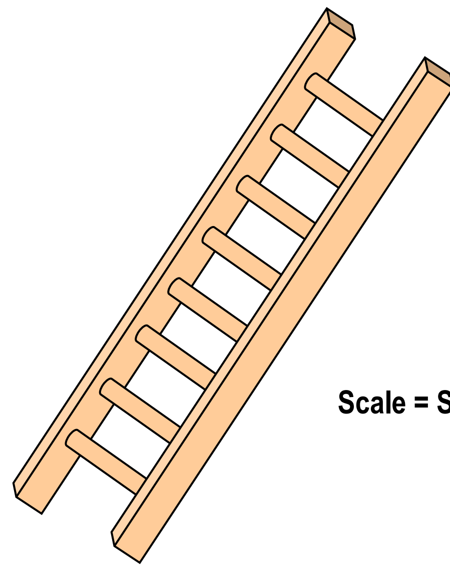
Scale = Series

A scale is a named series of keys/tones/notes played in a specific sequence of steps.
Example: Scale of Bb Major

Scale comes from the Italian *scala* which means *ladder*. Imagine climbing a scalar ladder.

The scale determines the pitch (frequency, high or low), the general mood (happy, sad, bluesy, exotic…), and the accidentals (flats/sharps) of a song.

The scale is the blueprint for constructing related Intervals and Chords.

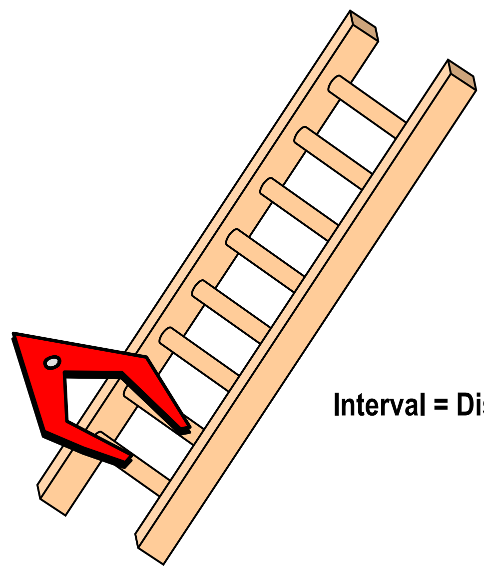


Interval = Distance

An interval is the musical distance in pitch between keys/tones/notes of a scale. (The physical distance varies based on the white or black keys in a scale.)
Example: 4th Interval

Intervals affect the tonal quality of a song. In general, the 3rd, 4th, 5th, 6th, and 8th (octave) intervals sound pleasant or harmonious, while the 2nd and 7th intervals sound unpleasant or dissonant. However, when combined with other notes, the 2nd and 7th intervals can produce a modern or more sophisticated sound.

When composing or improvising, intervals can help you figure out which tones to add to enhance other tones.

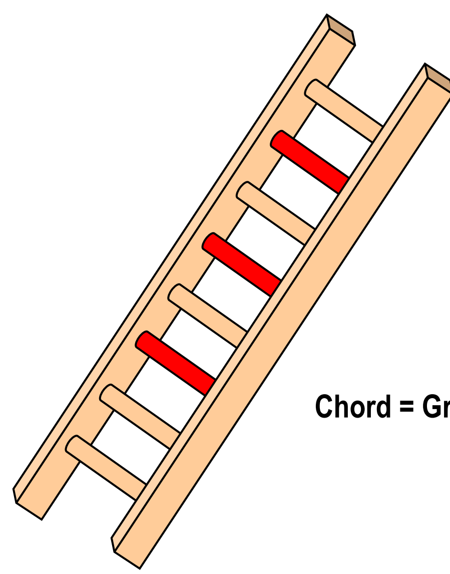


Chord = Group

A chord is a named group of keys/tones/notes.
Example: F chord

Chords add harmony to enhance a song's melody (the tune that you'd hum or sing).

Memorizing chord patterns can dramatically reduce the time it takes to learn and play songs.



Steps

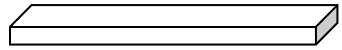
Steps are melodic *movements* between tones.
They are the building blocks for the scales, intervals, and chords.

BrainAid

Imagine that each piano key is a plank of wood used to build stair steps.

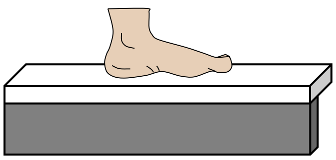
Each key is *half* a Step

Black-key halfstep

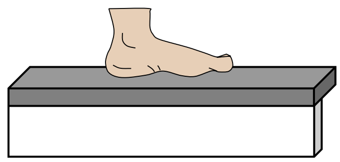


White-key halfstep

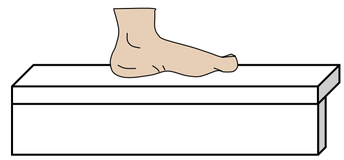
It takes 2 keys to make a *Whole* Step



Black-White Step



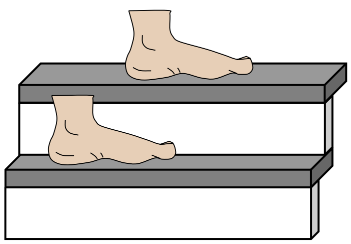
White-Black Step



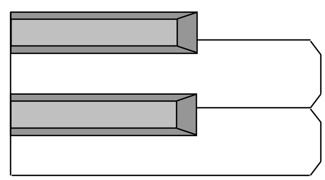
White-White Step

Whole Steps × 2 = keys
Multiply the numbers of steps by 2 to find how many keys were needed to build them.

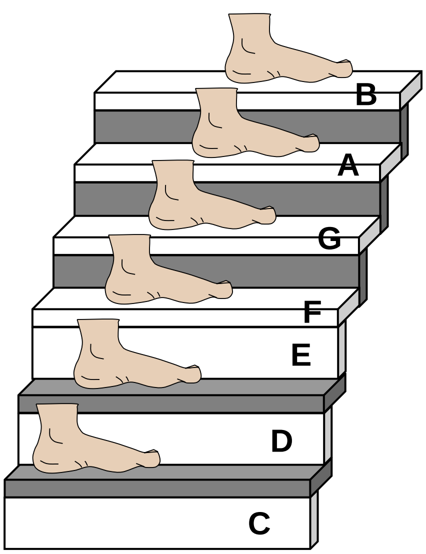
keys / 2 = Whole Steps
Divide the number of keys by 2 to find how many steps they can build.



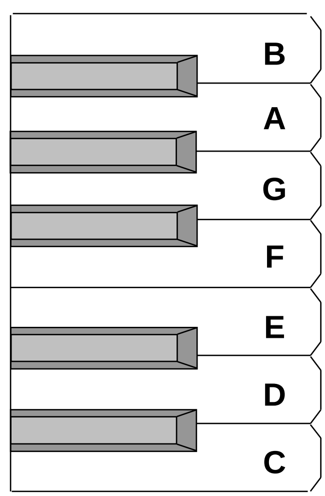
2 Whole Steps × 2 = 4 keys



4 keys / 2 = 2 Whole Steps



6 Whole Steps × 2 = 12 keys



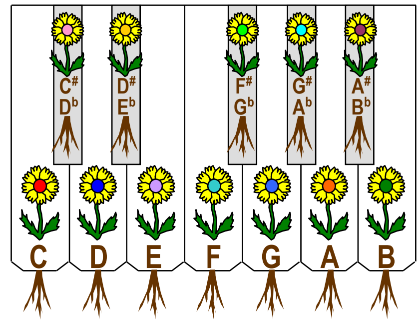
12 keys / 2 = 6 Whole Steps

Scales

A scale is a named *series* of keys/tones/notes played in a specific sequence of steps. Although *practicing* scales is associated with endless drill and drudgery, a *knowledge* of scales can be invaluable, especially when composing or improvising.

Root of a Scale

A scale begins on and is named after its *Root* key (also called its *keynote*). For example, a C scale (Key of C) begins on the C key (lever).



12 Roots

12 Possible Roots

A piano has multiple octaves of tonally-related 7 white and 5 black keys for a total of 12 Roots from which to build scales.

Enharmonic Roots

Enharmonic (same tone, different name) Roots are identical. So are their scales. For example, since $C^{\#} = D^{b}$, their scales are the same, except the $C^{\#}$ scale uses sharps and the D^{b} scale uses the equivalent flats. In any case, there are still only 12 actual roots.

Scale Step Patterns

Over the centuries, numerous scale step patterns have evolved. For example:
* Chromatic Scale: All half steps.
* Whole-Tone Scale: All Whole steps.
* Diatonic [dii-uh-TAW-nik] Scale: Combinations of Whole and half steps.

Scale Types

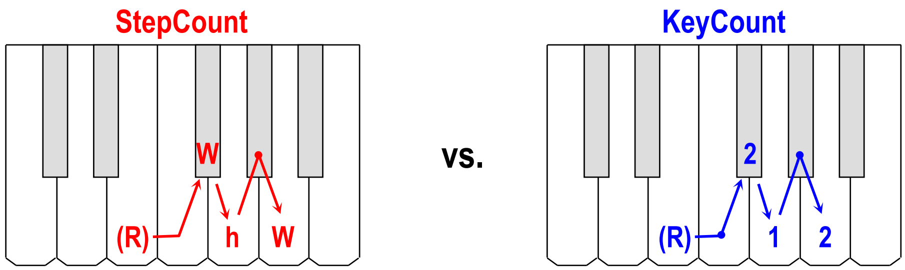
There are dozens of scales (ancient ones are called *Modes*). We'll explore three:
* Major: Follows a specific diatonic step pattern. Most common scale.
* Relative (Natural) Minor: Same sharps or flats as Major but Root = 6^{th} key of the Major scale.
* Harmonic (Parallel) Minor: Same Root as Major but with flatted 3^{rd} and 6^{th} keys.

StepCount vs. KeyCount

Scales are created by starting at the Root key and counting up a prescribed sequence of Whole and/or half steps. But counting *steps* can be tricky because ½ step = 1 key and 1 step = 2 keys. It's generally easier to remember and count by the *keys* that make up the steps.

Counting A Sequence

Example: (Root) Whole half Whole



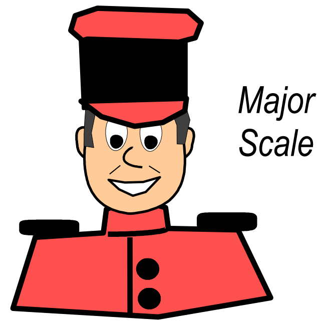
The StepCount (R) W h W can be more difficult to count than the KeyCount (R) 2 1 2.

Major Diatonic Scale

The Major Diatonic Scale is the basis of most classical and modern music.
It produces the familiar *Do-Re-Mi-Fa-So-La-Ti-Do* melody by following this specific sequence:

StepCount: (Root) Whole Whole half Whole Whole Whole half = (R) W W h W W W h
KeyCount: (Root) 2keys 2keys 1key 2keys 2keys 2keys 1key = (R) 2 2 1 2 2 2 1

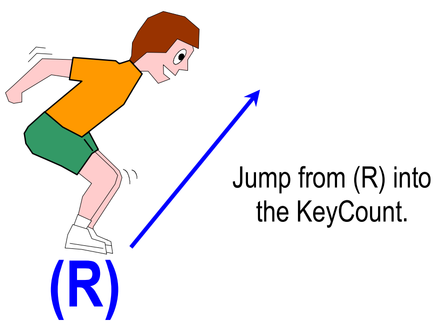
Major scales are used to compose many kinds of songs, including those played by marching bands. To remember the KeyCount of a Major Scale, imagine that it is the phone number of your favorite band leader, *Major Scale*. Memorize the Major's phone number, starting with the area code (R) followed by two groups of 2s that end with 1s.

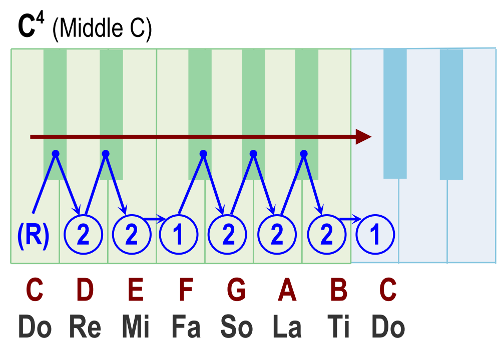


BrainAid (R) 2 2 1 – 2 2 2 1

C-Major Scale

Starting from the (R)oot **C**, the 221-2221 KeyCount sequence shown below creates the C-Major scale. Observe that it consists of all white keys. There are no sharps or flats. Test it on your keyboard to ensure that it follows the standard *Do-Re-Mi-Fa-So-La-Ti-Do* tune.

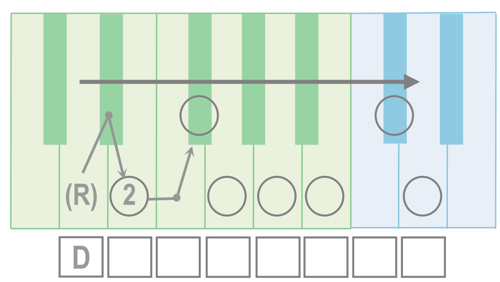




D-Major Scale

To Do: Starting from the Root **D**, count keys, draw arrows, and pencil in the Major's phone number in the circles. Test it with *Do-Re-Mi...*, then write the key names in the boxes beneath. There are 2 sharps.

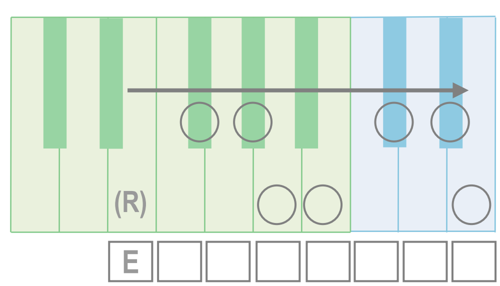
D-Major Scale: D E F# G A B C# D



E-Major Scale

To Do: Starting from the Root **E**, count keys, draw arrows, and pencil in the Major's phone number in the circles. Test it with *Do-Re-Mi...*, then write the key names in the boxes beneath. There are 4 sharps.

E-Major Scale: E F# G# A B C# D# E



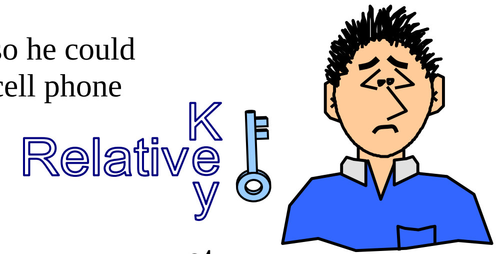
You can use this method to derive all 12 Major scales.

Relative Minor Scale

Starts on the 6th key of the Major Scale. Has the same sharps or flats (Key Signature).

StepCount:	(Root)	Whole	half	Whole	Whole	half	Whole	Whole	=	(R) W h W W h W W
KeyCount:	(Root)	2keys	1key	2keys	2keys	1key	2keys	2keys	=	(R) 2 1 2 2 1 2 2

Imagine that *Major Scale* gave his nephew a Key to his house so he could run errands for him. This relative is an underage minor whose cell phone number reflects his strong desire to be 21.

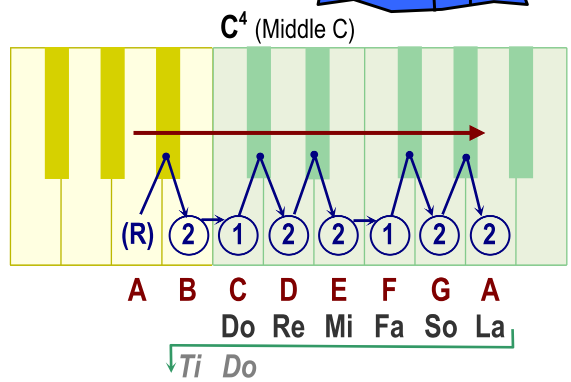


BrainAid (R) 2 1 2 – 2 1 2 2

A-minor scale (Relative to C-Major Scale)
The 6th key of the C-Major scale is **A**. We'll start below Middle C to keep the new scale in voice range then apply the 212-2122 KeyCount. This scale has the same Key Signature as C-Major with no sharps or flats.

Test a Relative scale by starting *Do-Re-Mi…* on its 3rd key, which is the Root of its related Major scale.

To test the A-minor scale, start on C and play *Do-Re-Mi-Fa-So-La* then drop down to A-minor's 2nd key and finish with *Ti-Do* to complete the tune at a lower pitch.

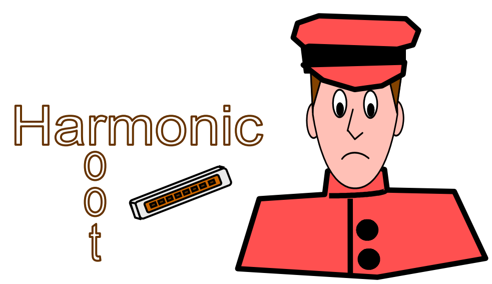


Harmonic Minor Scale

Starts on the Root of the Major Scale but flats the 3rd & the 6th keys.

StepCount:	(Root)	Whole	half	Whole	Whole	half	Whole+half	half	=	(R) W h W W h Wh h
KeyCount:	(Root)	2keys	1key	2keys	2keys	1key	3keys	1 key	=	(R) 2 1 2 2 1 3 1

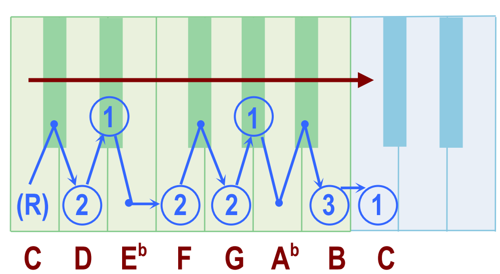
Imagine a harmonica-playing minor band member who begins marching from the same Root as *Major Scale* but plays a couple of flat tones along the way. His phone number matches the Relative minor scale but ends with his age: 31.



BrainAid (R) 2 1 2 – 2 1 3 1

C-minor scale (Harmonic to C-Major)
Starting on the Root **C** of the C-Major scale, the (R) 212-2131 KeyCount produces the harmonic C-minor scale. Observe the flatted 3rd and 6th keys.

There is no familiar tune to test this scale, but it will sound somewhat foreign or exotic, like Arabian Nights music.



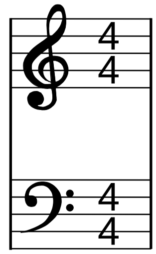
Sounds somewhat foreign or exotic

Keys

A musical Key is the first tone of a Scale. A *Key Signature* consists of the sharps or flats that appear *between* the Clef and Time Signature at the beginning of a song. Imagine a Key completing a circuit CKT [Clef-Key-Time]. As a convenience to composers, a Key Signature's sharps or flats apply to *every* related note in a song (unless canceled by a natural sign). But the player has to remember/play them all!

Empty Key Signature

Accidentals	Major (minor) Key
None	**C** (Am)



Relative Minor Key
Starts on the 6th key of its Major scale and shares the same Key Signature. In general, if a song ends on a Major chord, it is in the Major Key; if it ends on a minor chord, it is in the Relative Minor Key.

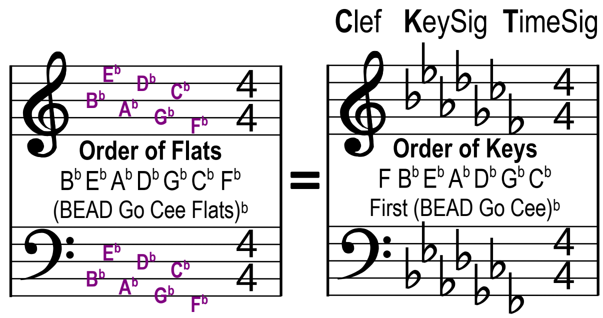
Flat Key Signatures

Accidentals	Major (minor) Key
B^b	**F** (Dm)
B^b E^b	**B^b** (Gm)
B^b E^b A^b	**E^b** (Cm)
B^b E^b A^b D^b	**A^b** (Fm)
B^b E^b A^b D^b G^b	**D^b** (B^bm)
B^b E^b A^b D^b G^b C^b	**G^b** (E^bm)
B^b E^b A^b D^b G^b C^b F^b	**C^b** (A^bm)

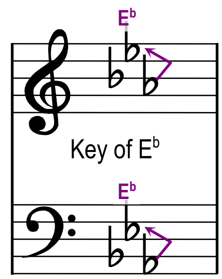
First Flat = Key of F

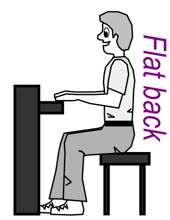
Flats are laid back.

Key = 1 flat back



To Find Key
From the last flat, go one *flat back.*





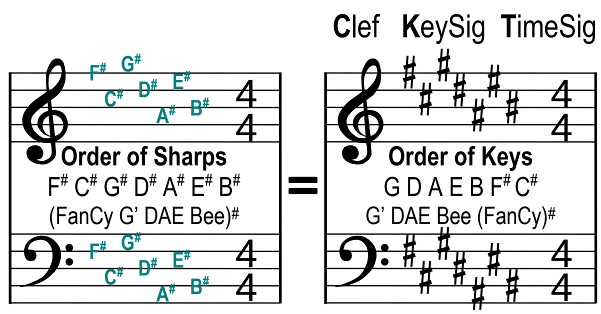
Observe that flat and sharp letters are reversed:
(B E A D G C F)^b vs. (F C G D A E B)$^\#$

Sharp Key Signatures

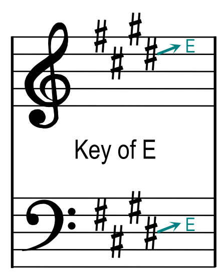
Sharps	Major (minor) Key
$F^\#$	**G** (Em)
$F^\#$ $C^\#$	**D** (Bm)
$F^\#$ $C^\#$ $G^\#$	**A** ($F^\#$m)
$F^\#$ $C^\#$ $G^\#$ $D^\#$	**E** ($C^\#$m)
$F^\#$ $C^\#$ $G^\#$ $D^\#$ $A^\#$	**B** ($G^\#$m)
$F^\#$ $C^\#$ $G^\#$ $D^\#$ $A^\#$ $E^\#$	**$F^\#$** ($D^\#$m)
$F^\#$ $C^\#$ $G^\#$ $D^\#$ $A^\#$ $E^\#$ $B^\#$	**$C^\#$** ($A^\#$m)

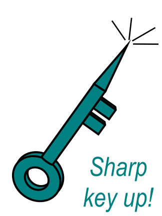
Sharps are keyed up!

Key = 1 key up



To Find Key
From the last sharp, go one *key up.*





Intervals

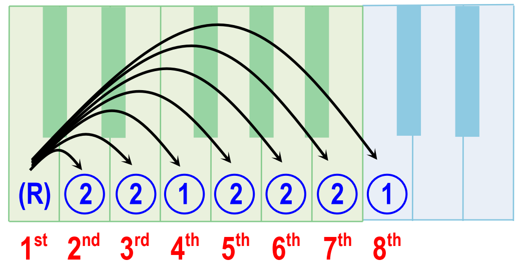
To learn how to play interval spans without looking, see the *Sight Reading* lesson.

An interval is the musical *distance* in pitch between keys/tones/notes of a scale.
Scale intervals are numbered by their distance from the Root key.

Interval Positions

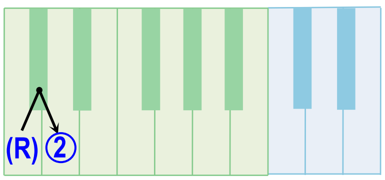
In a scale, the Root is in the 1st interval position followed by the 2nd, 3rd, 4th, etc. up to the 8th (octave) interval position.

C-Major Scale

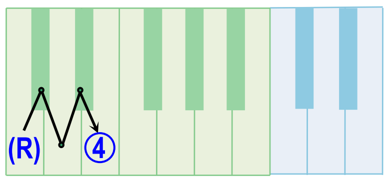


Interval KeyCounts

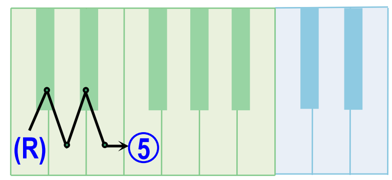
To find intervals for any Major Scale, count keys from the Root to each key as shown below for the C-Major scale.



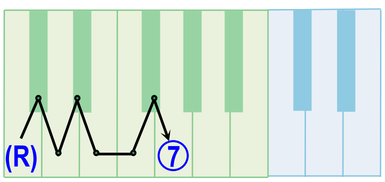
2nd Interval : KeyCount = 2



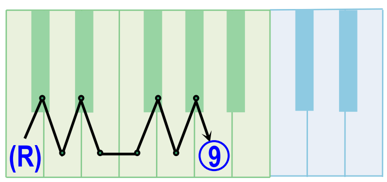
3rd Interval : KeyCount = 4



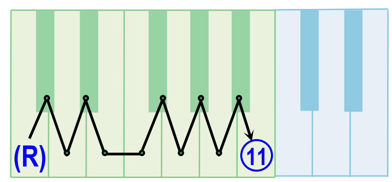
4th Interval : KeyCount = 5



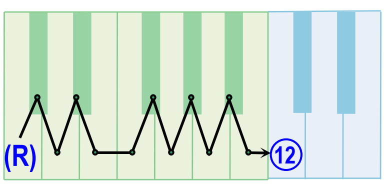
5th Interval : KeyCount = 7



6th Interval : KeyCount = 9



7th Interval : KeyCount = 11



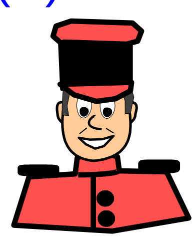
8th Interval : KeyCount = 12

Interval Position:	1st	2nd	3rd	4th	5th	6th	7th	8th
Interval KeyCount	(R)	2	4	5	7	9	11	12
Perfect Intervals	P			P	P			P

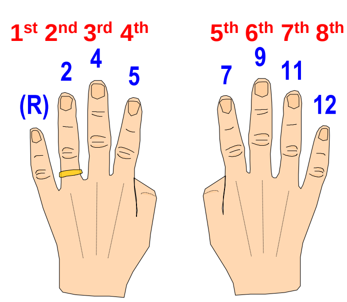
The Perfect intervals (1st, 4th, 5th, 8th) are considered the most harmonious or *consonant*.
The 3rd and 6th intervals also sound rather pleasant.
But the 2nd and 7th intervals can sound somewhat unpleasant or *dissonant.*

To remember *Major Scale's* Interval KeyCounts, imagine that (R) = Resident followed by his Social Security Number (SSN):

(R) 245-79-1112



Major Scale
Scale KeyCount
(R) 221-2221
Interval KeyCount
(R) 245-79-1112



To Match KeyCount to Interval
Hold 8 fingers up to represent Intervals 1-8, then recite the SSN.

Counting Down

Intervals can also be reached by counting *down* from the 8th interval.
Since an octave has 12 keys:
UpCount + DownCount = 12

Interval	UpCount	DownCount
1st	0	12
2nd	2	10
3rd	4	8
4th	5	7
5th	7	5
6th	9	3
7th	11	1
8th	12	0

Chords

To learn individual chords, see the Chords and Chord Variations topics.

A chord is a named *group* of keys/tones/notes. Chord *order* defines a song's harmonic structure. This order remains the same even if a song is transposed (changed) to a different Key (scale) to better match the range of a singer's voice or accompanying instruments. To keep the chord names independent of the Key, composers use either Roman Numerals and/or Tonal Names for each chord.

Roman Numerals
Uppercase = Major   lowercase = minor

Tonal Names
Tonic = Root   Sub = below   Super = above

VI *Sub*mediant	VII *Sub*tonic	**I Tonic**	II *Super*tonic	III Mediant	IV *Sub*dominant	**V Dominant**
		Root		4 keys above		7 keys above

Normally arranged I through VII, the numeral order above better shows the sub/super relationship to the Tonic. If tonal naming were consistent, the Mediant would be called the *Super*mediant. But "median" means "middle," and the Mediant is the middle of the Major Triad.

Major Triad
Major Triads (3-key chords) are formed from the 1st, 3rd, and 5th keys of a Major scale which corresponds to the KeyCount (R)-4-7.

Chords of a Scale

A scale's chords are the triads that can be formed by using *only* the notes in that scale:
3 Major (1-3-5): I-IV-V + 3 minor (1-3^b-5): ii-iii-vi + 1 diminished (1-3^b-5^b): vii°

Transposer Chart: To transpose chords or notes
* Determine the Key (scale) of the song from the Key Signature.
* Circle the song's chords (add variations) or notes below.
* Pick the Key to transpose to.
* Box the new chords (add variations) or notes

Example
C-Major
C-Am-G7 (I-vi-V7)
G-Major
G-Em-D7 (I-vi-V7)

Major Chord Numeral	I	II	III	IV	V	VI	VII	I
minor chord numeral	i	ii	iii	iv	v	vi	vii	i
Interval Number	1st	2nd	3rd	4th	5th	6th	7th	8th
Tonal Name	Tonic	Supertonic	Mediant	Subdominant	Dominant	Submediant	Subtonic	Tonic
Chords of Scale	I	ii	iii	IV	V	vi	vii°	I
C Major	C	Dm	Em	F	G 7	Am	Bdim	C
D Major	D	Em	F#m	G	A	Bm	C#dim	D
E Major	E	F#m	G#m	A	B	C#m	D#dim	E
F Major	F	Gm	Am	Bb	C	Dm	Edim	F
G Major	G	Am	Bm	C	D 7	Em	F#dim	G
A Major	A	Bm	C#m	D	E	F#m	G#dim	A
B Major	B	C#m	D#m	E	F#	G#m	A#dim	B
C#/Db Major	C#/Db	D#m/Ebm	Fm	F#/Gb	G#/Ab	A#m/Bbm	Cdim	C#/Db
D#/Eb Major	D#/Eb	Fm	Gm	G#/Ab	A#/Bb	Cm	Ddim	D#/Eb
F#/Gb Major	F#/Gb	G#m/Abm	A#m/Bbm	B	C#/Db	D#m/Ebm	Fdim	F#/Gb
G#/Ab Major	G#/Ab	A#m/Bbm	Cm	C#/Db	D#/Eb	Fm	Gdim	G#/Ab
A#/Bb Major	A#/Bb	C	Dm	D#/Eb	F	Gm	Adim	A#/Bb
KeyCounts								
Major Scale	(Root)	2	2	1	2	2	2	1
Major Intervals	(Root)	2	4	5	7	9	11	12
Major Triad	(Root)	---	4	---	7	---	---	---

Print the TRANSPOSER chart (separate lesson section) on cardstock and laminate it so you can use a dry-erase pen to transpose chords or notes.

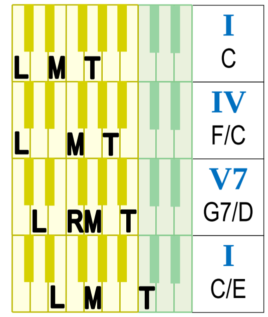
For more progressions, see the *Improvisation Techniques* lessson.

Chord Progressions

A progression is a specific *series of chords*.
There are a huge number of possibilities, but certain series have become standards.

Most Popular: I—IV—V7—I

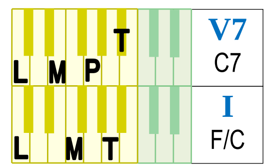
This progression is likely the most popular in western-culture music.
Tonic I : Subdominant IV : Dominant Seventh V7 : Tonic I
Although not always repeated in this exact sequence, these four chords will weave through the song.



To Do: As shown, play I-IV-V7-I in the Key of C.
Some chords have been inverted for easier finger transitions, e.g., F/C means to play the F chord with the C at the bottom.

Tension-Resolution: V7—I

It's no coincidence that the most popular progression (above) ends with V7-I. In fact, this is the secret to its success. Just as a movie or novel would be boring without some fundamental tension or conflict, so would a song. The V7 chord produces a feeling of *tension* that excites or disturbs listeners and makes them anticipate the *resolution* that comes when the Tonic I is played.



Play 3 times

To Do: As shown, play the C7 chord 3 times to establish a feeling of tension, then play the F/C chord to resolve it. Imagine holding your breath on C7, then letting it out with a sigh of relief on F.

To Do: Use the previous Chord Numerals chart to fill in the Tonic I chords for: A7:____ B7:_____ E7:_____ Answers: D, E, A

12-Bar Blues: I—I—I—I IV—IV I—I V—IV—I—I

This is the famous *12-Bar Blues Progression*, which occurs over twelve measures.
The Left Hand Boogie (separate lesson) follows this pattern with CCCC FF CC GFCC.

Chord Substitutions

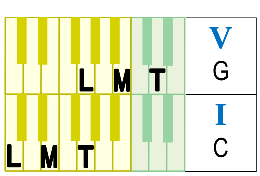
When improvising, substituting chords can enhance a song. Here are some common substitutions:
vi for **I** (e.g., Am for C); **iii** for **I** (e.g., Em for C); **II** for **ii** (e.g., D for Dm); **III** for **iii** (e.g., E for Em)

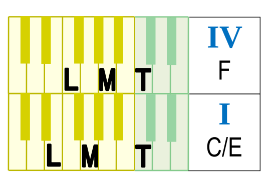
Cadences

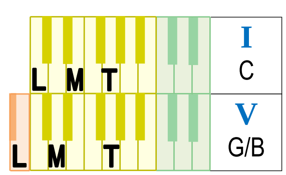
A cadence is a progression that ends a musical phrase or the song itself.

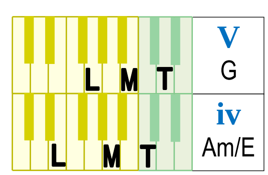
To Do: As shown, play the various Cadence samples, listening to their tonal quality.

CADENCE	**Perfect** (Authentic)	**Plagal** (A-men)	**Imperfect** (Half)	**Deceptive** (False)
Progression	V or V7 to —I	IV—I	I—V	V—not I





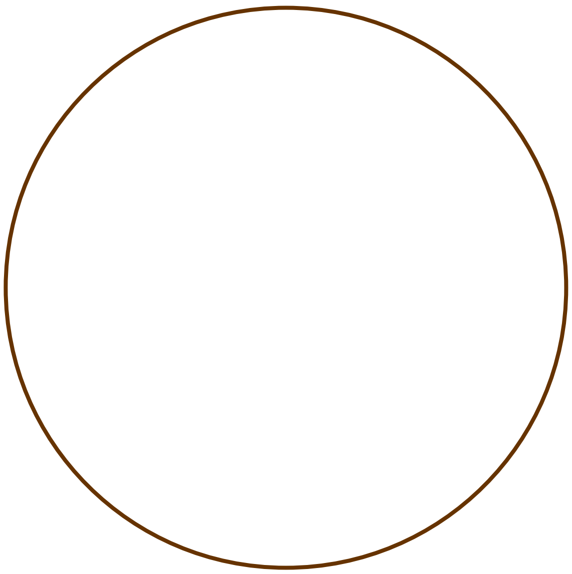




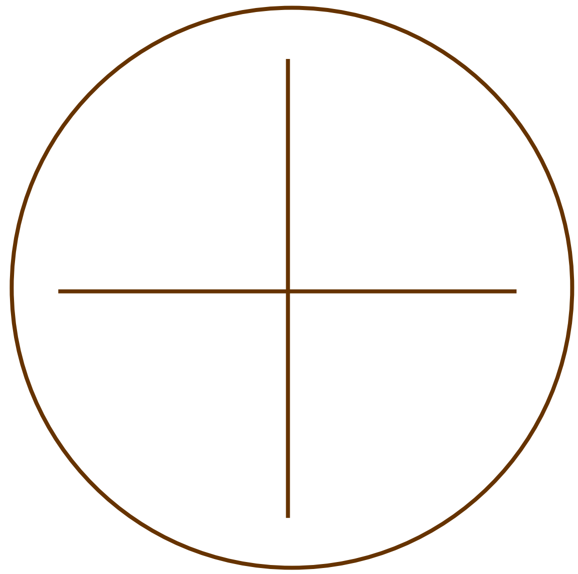
Circle of Fifths

The Swiss Army Knife of Music!

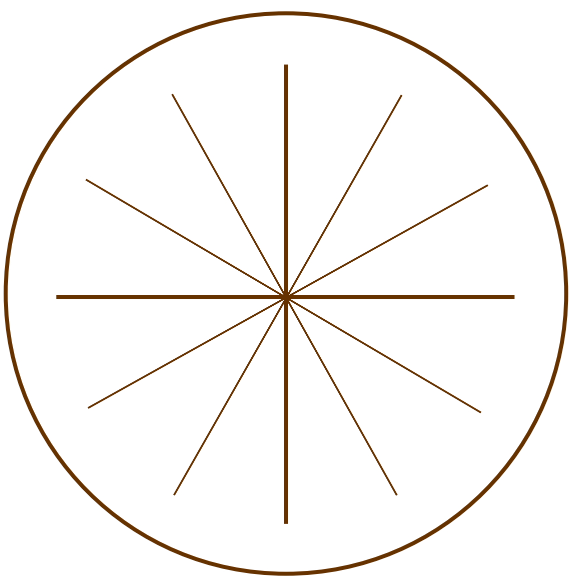
The **Circle of Fifths** is a diagram that composers, arrangers, *and you* can use as an aid to understanding, creating, or modifying a song. It compactly displays all 12 tones of the keyboard and a wealth of useful information. Observing its construction will help you understand its structure. We'll compare the Circle of Fifths to a pie we'll serve at a CAFE we own.



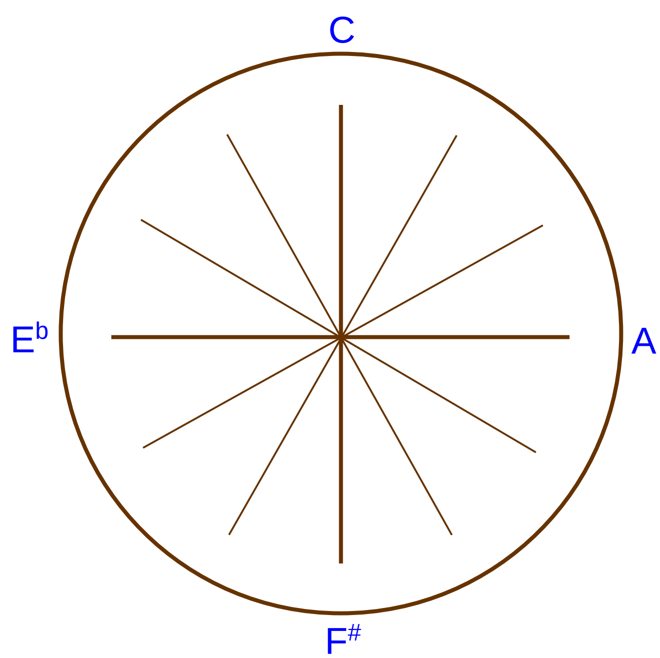
Step 1: Bake the pie.



Step 2: Cut it into four big pieces.



Step 3: Cut the four big pieces into thirds so we can serve 12 customers.

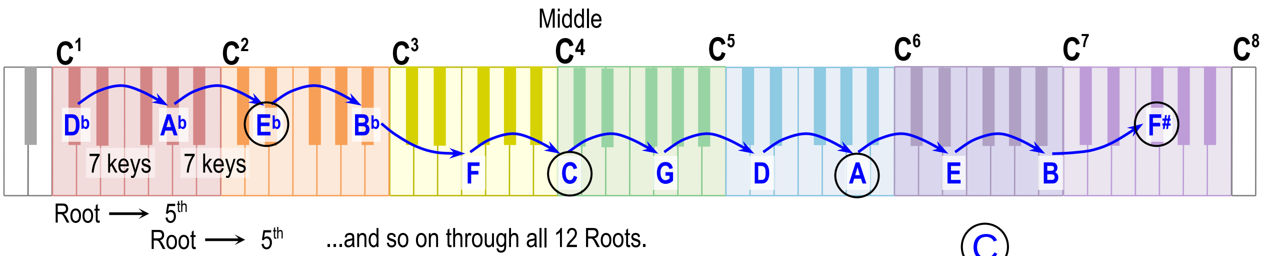


Step 4: Decorate the four big cut edges clockwise with candy letters: C A F$^{\#}$ E^{b}.
Customers Always Feel *sharp* when they Eat *flat* pies.

Major Scales / Fifths

The Circle of *Fifths* is so named because it displays Major scale/chord letters at every *fifth* interval. To reach a 5^{th} interval, we start from the Root and count *up* 7 keys per the formula [(R) 245-79-1112].

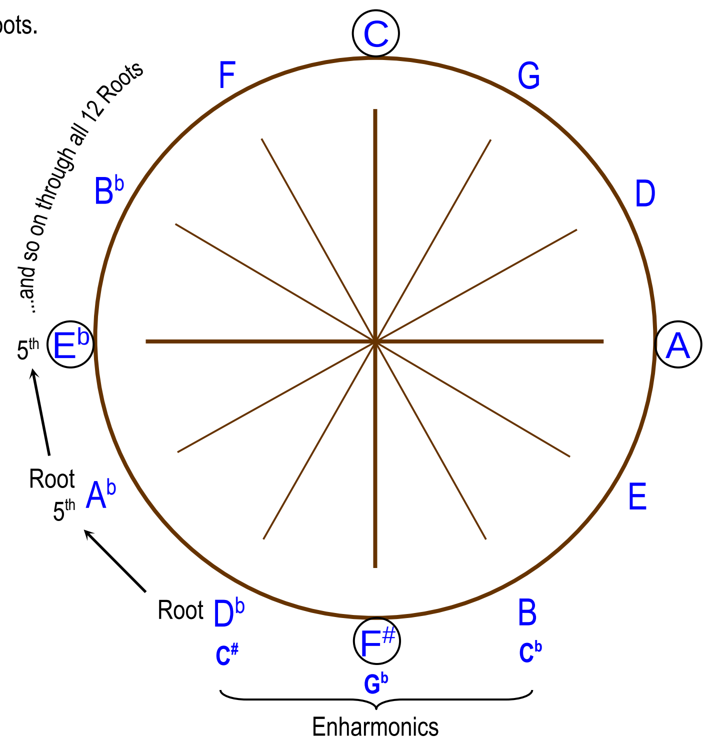
In the following keyboard diagram, we treat **D**^{b} as a Root and count up 7 keys to its 5^{th} interval **A**^{b}. Then we treat **A**^{b} as a Root and count up another 7 keys to *its* 5^{th} interval **E**^{b} and so on until we reach the 12th Root **F**$^{\#}$. If we continued to count up another 7 keys from F$^{\#}$, we'd come full circle to D^b.



Step 5: Start at the 7 o'clock position with D^b and fill in additional candy letters clockwise around the pie in the order we derived them above:

D^b A^b E^b B^b F C G D A E B F$^{\#}$

Then add slightly smaller enharmonic (same tone, different name) letters C$^{\#}$ G^b C^b below Db F$^{\#}$ B.



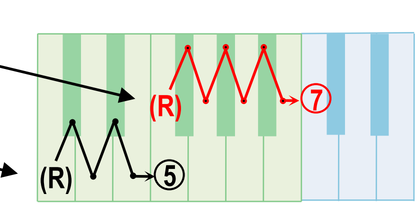
Circle of Fourths?

All letters on the keyboard above, counting either up or down, are 7 keys apart, which would seem to make them all 5th intervals of each other.

But *named* intervals are counted going UP the keyboard, starting from the designated Root key.

For example, if we start with a Root of **F** and count *up* 7 keys, we arrive at **C.** Therefore, **C** is the 5^{th} interval of **F.**

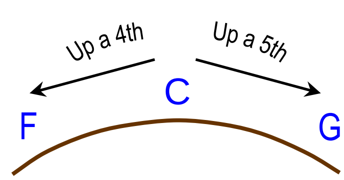
But if we start with a Root of **C** and count *up* to **F**, we've only gone 5 keys, which is a 4^{th} interval per [(R) 245-79-1112]. So **F** is the 4^{th} interval of **C**.



From **F**, **C** is the 5^{th} interval.
From **C**, **F** is the 4^{th} interval.

The Circle of Fifths is meant to be read in a <u>clockwise</u> direction, going <u>up a 5^{th}</u> from letter to letter.

But if read in a <u>counterclockwise</u> direction, it goes <u>up a 4^{th}</u> from letter to letter.

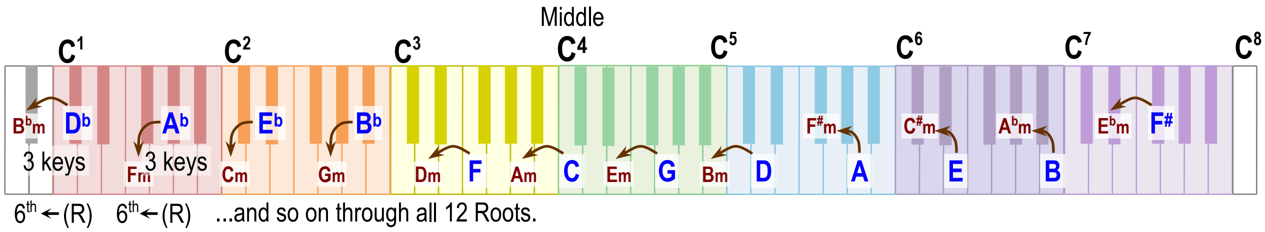


For that reason, you'll sometimes see it referred to as the Circle of *Fourths*!

Relative Minor Scales

The *Relative* Minor Scale starts on the 6th position of its corresponding Major scale but shares all the same keys, including sharps or flats, as the Major scale. The 6th position is 9 keys *up* [(R) 245-7**9**-1112] from the Root, which is the same as 3 keys *down* (9 + 3 = 12).

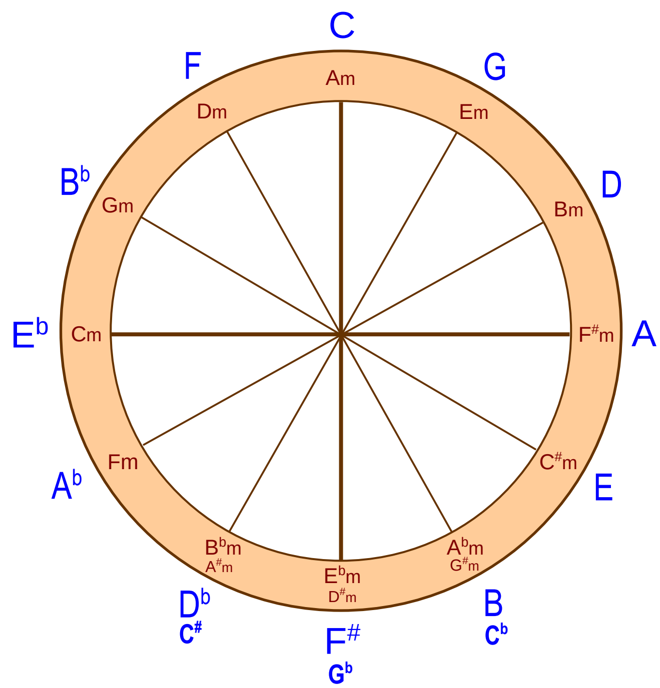
In the following keyboard diagram, we count 3 keys *down* from each of the 12 Roots to their respective relative minor 6ths. For example, treating **D^{b}** as a Root and counting 3 keys down yields its 6th interval **B^{b}** which starts the relative B^{b}m scale.



Step 6: Starting at D^{b}, create and decorate an *inner* ring of the pie clockwise with *minor* candy letters in the order we derived them above:

B^{b}m Fm Cm Gm Dm Am Em Bm F$^{\#}$m C$^{\#}$m A^{b}m E^{b}m

Add smaller enharmonic candies **A$^{\#}$m D$^{\#}$m G$^{\#}$m** below the three bottom minor letters **B^{b}m, E^{b}m, A^{b}m.**

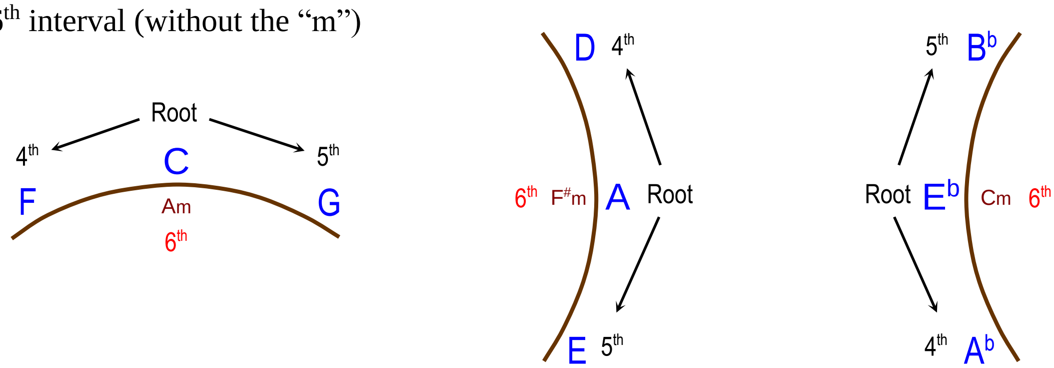


Sixth Interval

Dropping the minor "m" from the letters on the inner ring yields the 6th interval of each Root on the outer ring. For example, moving in from the C Root yields Am. Dropping the "m" yields "A," which is the 6th interval of C.

4th / 5th / 6th Intervals

So from any Root on the outer Circle:
* Counterclockwise = 4th interval
* Clockwise = 5th interval
* In = 6th interval (without the "m")



Be sure to shift your up/down/left/right orientation as you travel around the Circle.

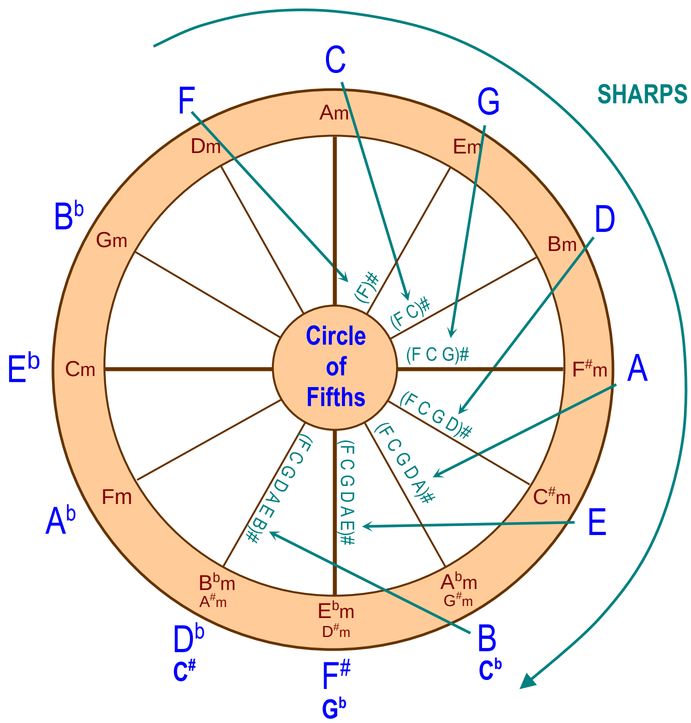
Key Signatures

After adding an inner medallion to the center of our pie with "Circle of Fifths" icing, we'll label the cut of each Key with the sharps or flats that make up its Key Signature (same for both the Major and its Relative Minor scale). The C / Am Scales have no sharps or flats, so their cut will remain empty.

Sharps

Step 7: Key Signature sharps follow the Major Scale letters clockwise on the outer ring from **F** to **B**. Imagine greeting your customer, Bee, with a (**F**an**C**y **G**ood **DA**y**E B**ee**!**)$^\#$ while you decorate the right cuts of the pie with *sharp* candy letters.

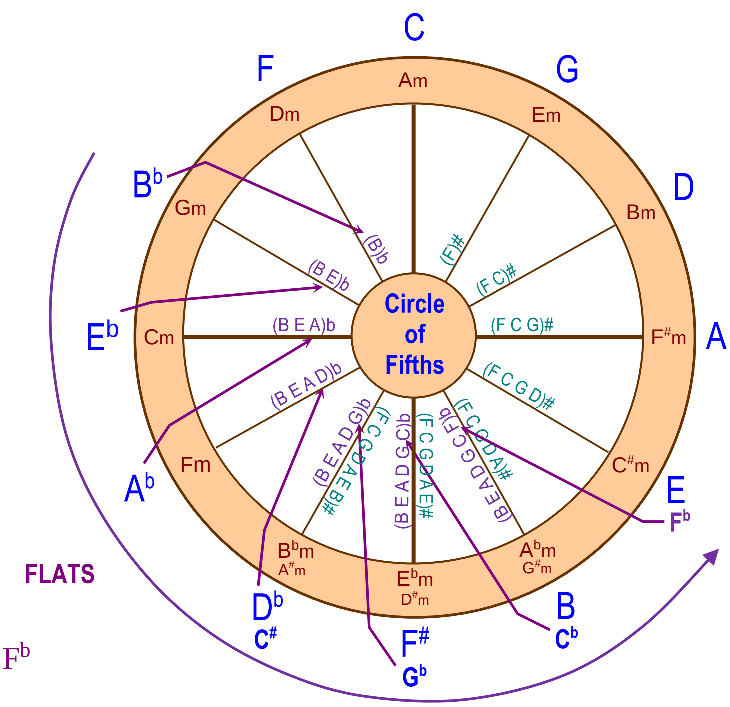
Scale	Key Signature
C / Am	---
G / Em	$F^\#$
D / Bm	$F^\#$ $C^\#$
A / $F^\#$m	$F^\#$ $C^\#$ $G^\#$
E / $C^\#$m	$F^\#$ $C^\#$ $G^\#$ $D^\#$
B / $G^\#$m	$F^\#$ $C^\#$ $G^\#$ $D^\#$ $A^\#$
$F^\#$ / $D^\#$m	$F^\#$ $C^\#$ $G^\#$ $D^\#$ $A^\#$ $E^\#$
$C^\#$ / $A^\#$m	$F^\#$ $C^\#$ $G^\#$ $D^\#$ $A^\#$ $E^\#$ $B^\#$



Flats

Step 8: Key Signature flats follow the Major Scale letters counterclockwise from **B^b** to **E** (=**F^b**). Imagine decorating the left cuts of the pie with *flat* candy beads and telling your customers to take a look by saying (**BEAD G**o **C**ee **F**lats)^b.

Scale	Key Signature
F / Dm	B^b
B^b / Gm	B^b E^b
E^b / Cm	B^b E^b A^b
A^b / Fm	B^b E^b A^b D^b
D^b / B^bm	B^b E^b A^b D^b G^b
G^b / E^bm	B^b E^b A^b D^b G^b C^b
C^b / A^bm	B^b E^b A^b D^b G^b C^b F^b



Using Circle to Find Major Scale Chords

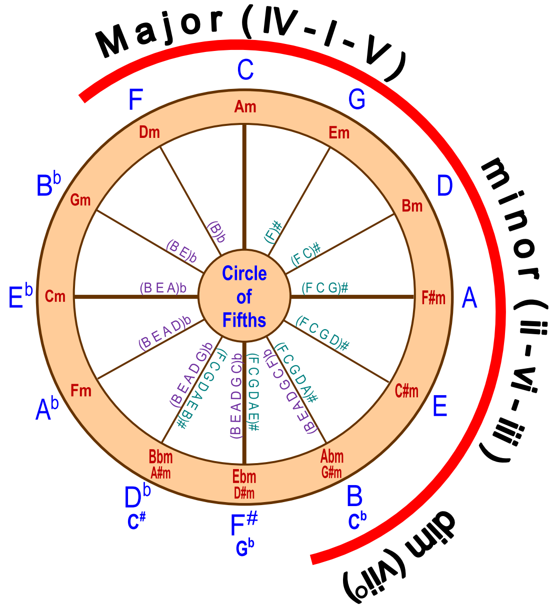
There are several ways to use the Circle of Fifths to find the 3-note triads formed using only the keys of each Major Scale. When composing a new song, these chords tend to sound good together (except for the diminished chord). When picking out an existing song by ear, these chords are likely to match the melody.

(Semi) Circle the Chords

Starting with the chord counterclockwise to the desired I chord, draw a semicircle to discover the scale's 3 Major, 3 minor, and 1 diminished chords.

Arch the Chords

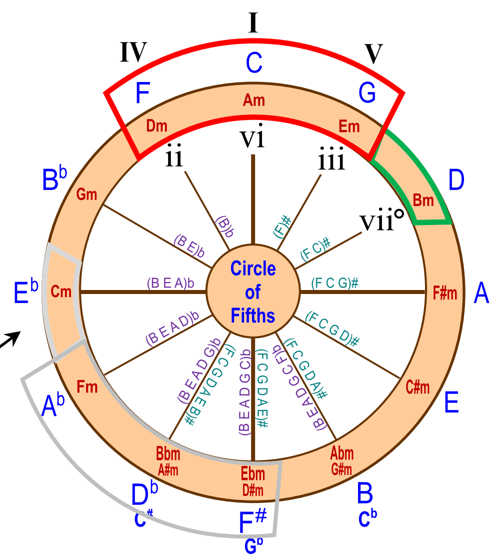
Draw a large arch around the IV-I-V outer chords and the corresponding ii-vi-iii inner chords and a small arch around the adjacent vii° chord to the right.



Chords of C

IV	I	V	
F	C	G	
ii	**vi**	**iii**	**vii°**
Dm	Am	Em	Bdim

Notice how **D-A-E-B** on the outer ring parallels **Dm-Am-Em-Bm** on the inner ring.



To Do

Arch the Chords of D^b

(Use *b* enharmonics)

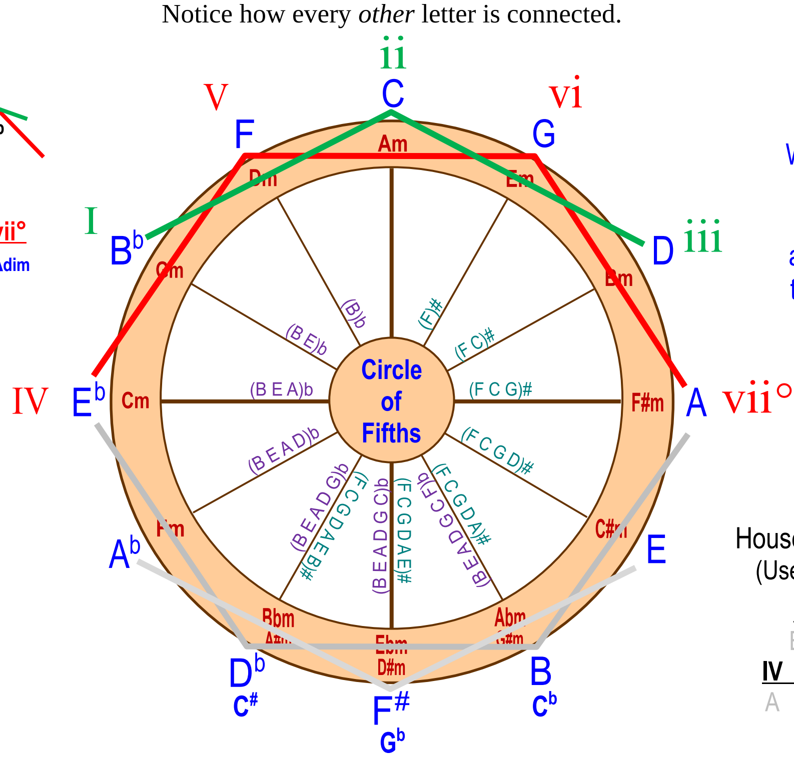
I	ii	iii	
D^b	E^bm	Fm	
IV	**V**	**vi**	**vii°**
G^b	A^b	B^bm	Cdim

House the Chords

To find the triads *in order*, start with the desired Root & draw a **I-ii-iii** roof perched on top of a **IV-V-vi-vii°** house. Notice how every *other* letter is connected.

Chords of B^b

I	ii	iii	
B^b	Cm	Dm	
IV	**V**	**vi**	**vii°**
E^b	F	Gm	Adim



ENHARMONICS

When finding the Chords of a Scale, match the sharps or flats that appear on the spokes of the Circle. For example, for the A Scale, use $C^\#$ instead of D^b.

To Do

House the Chords of E

(Use **#** enharmonics)

I	ii	iii	
E	$F^\#$m	$G^\#$m	
IV	**V**	**vi**	**vii°**
A	B	$C^\#$m	$D^\#$dim

Using Circle to Transpose

When a song is too high or low for a singer's voice range, you can transpose it to a different Key.

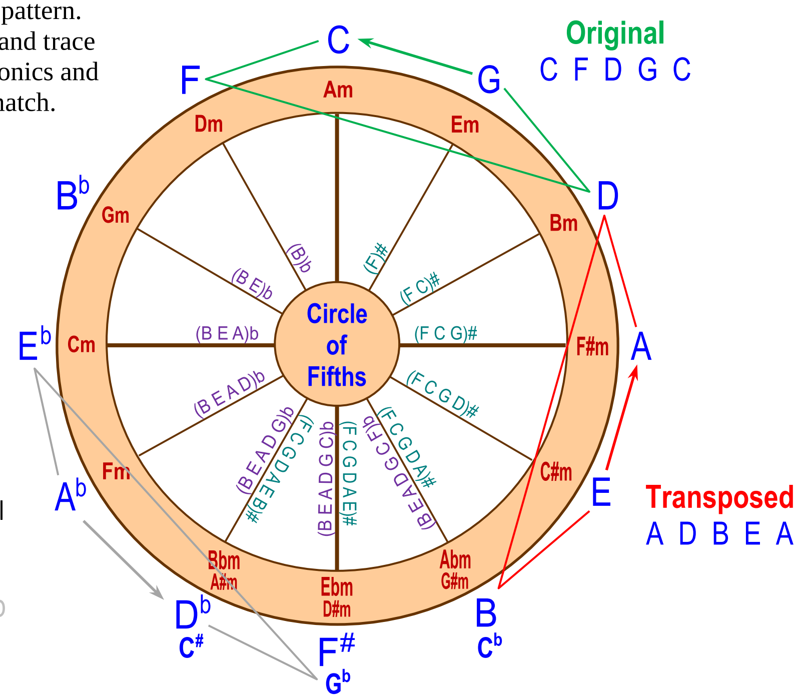
Trace to Transpose

Trace the original Key's chord or note pattern. Move to the desired starting chord/note and trace the same pattern. Use consistent enharmonics and add chord variations (m, 7, etc.) to match.

To Do

Transpose the Original pattern to Db. (Use *b* enharmonics)

Db Gb Eb Ab Db



Using Circle to Extend a Chord Progression

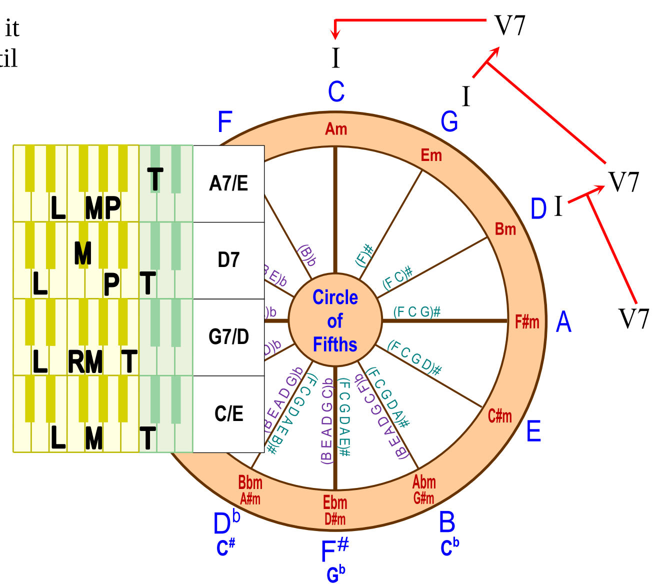
The order or progression of chords helps define a song. The V7 chord creates a feeling of tension, hence interest, that is resolved by playing the corresponding I chord. Here's one way to extend that tension.

T for Tension

To prolong V7 chord tension, travel counterclockwise to the adjacent I chord but follow the red "T" to play it as a V7 chord. Repeat as desired until resolving to a final I chord.

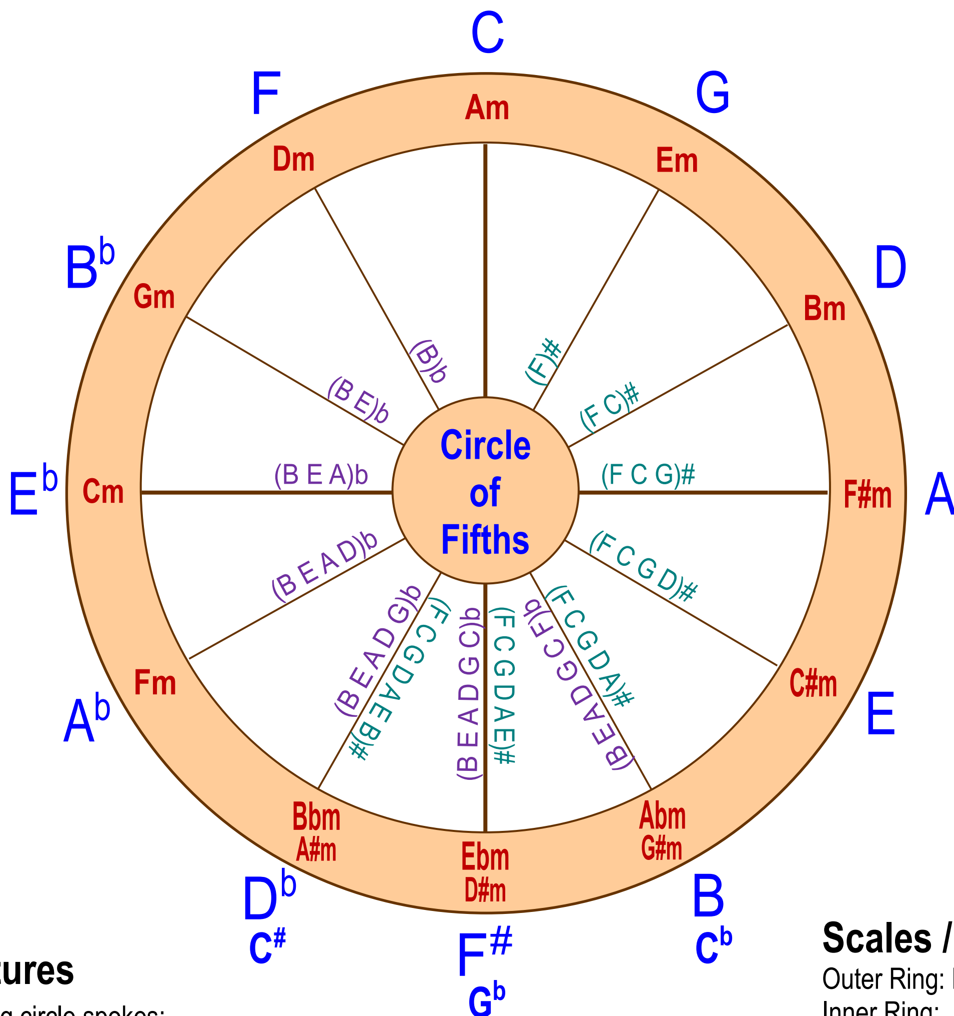
To Do

Play this chord progression to hear the extended tension and final resolution.



Circle of Knowledge!

There's a wealth of information stored in this compact wheel!



Key Signatures

Sharps/flats along circle spokes:
F# C# G# D# A# E# B#
(FanCy Good DAyE Bee!)#

Bb Eb Ab Db Gb Cb Fb
(BEAD Go Cee Flats)b

To find Major Key:
Sharps are keyed up: F# = G
Flats are laid back: Bb Eb = Bb
- Except <u>F</u>irst <u>F</u>lat (Bb) = <u>F</u>

If song ends on:
* Major chord: Major Key
* Minor chord: minor Key

Using the Circle

Refer to accompanying page for:
* Arch IV-I-V / ii-vi-iii vii° chords
* House I-ii-iii / IV-V-vi-vii° chords
* T for Tension: V7 to I
* Trace to Transpose

Scales / Intervals

Outer Ring: Major Scales
Inner Ring: Relative minor scales

From any Major Root:
* Counterclockwise = 4th interval
* Clockwise = 5th interval
* In = 6th interval (without the "m")

Chords / Notes

Outer Ring: Notes of octave
Major I Chords
Inner Ring: minor vi chords

From any Major I chord:
* Counterclockwise = IV chord
* Clockwise = V chord
* In = minor vi chord

If desired, print the "88 & 5th Chart" (separate lesson section) and laminate it so you can use a dry-erase pen to alter songs or build scales, intervals, and chords.